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NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 4	DEC 08	INPADOC: Legal Status data reloaded
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NEWS 6	OCT 10	PCTFULL: Two new display fields added
NEWS 7	OCT 21	BIOSIS file reloaded and enhanced
NEWS 8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9	NOV 24	MSDS-CCOHS file reloaded
NEWS 10	DEC 08	CABA reloaded with left truncation
NEWS 11	DEC 08	IMS file names changed
NEWS 12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS 13	DEC 09	STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS 14	DEC 17	DGENE: Two new display fields added
NEWS 15	DEC 18	BIOTECHNO no longer updated
NEWS 16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS 17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19	DEC 22	ABI-INFORM now available on STN
NEWS 20	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 21	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS 22	FEB 05	German (DE) application and patent publication number format changes
NEWS 23	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS 24	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS 25	MAR 03	FRANCEPAT now available on STN

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COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

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FILE COVERS 1907 - 18 Mar 2004 VOL 140 ISS 13
FILE LAST UPDATED: 18 Mar 2004 (20040318/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s hydrophob?(W)interact?(W)chromat?
129606 HYDROPHOB?
1179083 INTERACT?
784047 CHROMAT?
L1 2109 HYDROPHOB?(W)INTERACT?(W)CHROMAT?

=> s hydrophob?(W)interact?(W)HPLC
129606 HYDROPHOB?
1179083 INTERACT?
142614 HPLC
30 HPLCS
142631 HPLC
(HPLC OR HPLCS)
L2 111 HYDROPHOB?(W)INTERACT?(W)HPLC

=> s l1 or l2
L3 2177 L1 OR L2

=> s gammaglob?
L4 227 GAMMAGLOB?

=> s gammag(W)glob?
0 GAMMAG
184652 GLOB?
L5 0 GAMMAG(W)GLOB?

=> s gamma(W)glob?

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        729888 GAMMA
          4944 GAMMAS
        730034 GAMMA
                 (GAMMA OR GAMMAS)
        184652 GLOB?
L6       21061 GAMMA(W)GLOB?

=> s immunoglob?
        100192 IMMUNOGLOB?
         47847 IG
         12935 IGS
         54051 IG
                 (IG OR IGS)
L7      121168 IMMUNOGLOB?
                 (IMMUNOGLOB? OR IG)

=> s l4 or l5 or l6 or l7
L8      140451 L4 OR L5 OR L6 OR L7

=> s albumin
        114682 ALBUMIN
         73393 ALBUMINS
L9      132474 ALBUMIN
                 (ALBUMIN OR ALBUMINS)

=> s plasma or blood or serum
        729793 PLASMA
         66223 PLASMAS
        735972 PLASMA
                 (PLASMA OR PLASMAS)
       1107638 BLOOD
          1141 BLOODS
       1107749 BLOOD
                 (BLOOD OR BLOODS)
        490878 SERUM
         16640 SERUMS
         40760 SERA
             5 SERAS
        512394 SERUM
                 (SERUM OR SERUMS OR SERA OR SERAS)
L10    1765518 PLASMA OR BLOOD OR SERUM

=> s l3 and l8 and l9 and l10
L11         23 L3 AND L8 AND L9 AND L10

=> file biosis
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                31.88      32.09

FILE 'BIOSIS' ENTERED AT 16:39:52 ON 20 MAR 2004
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CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 17 March 2004 (20040317/ED)

FILE RELOADED: 19 October 2003.

=> s l11
         55967 HYDROPHOB?
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         574000 INTERACT?
         432862 CHROMAT?
           1671 HYDROPHOB?(W)INTERACT?(W)CHROMAT?
          55967 HYDROPHOB?
         574000 INTERACT?
          75534 HPLC
             24 HPLCS
          75545 HPLC
                  (HPLC OR HPLCS)
             34 HYDROPHOB?(W)INTERACT?(W)HPLC
            975 GAMMAGLOB?
             18 GAMMAG
              1 GAMMAGS
             19 GAMMAG
                  (GAMMAG OR GAMMAGS)
         233231 GLOB?
              0 GAMMAG(W)GLOB?
         262228 GAMMA
            222 GAMMAS
         262336 GAMMA
                  (GAMMA OR GAMMAS)
         233231 GLOB?
          12594 GAMMA(W)GLOB?
         163922 IMMUNOGLOB?
          95538 ALBUMIN
           2137 ALBUMINS
          96532 ALBUMIN
                  (ALBUMIN OR ALBUMINS)
         501503 PLASMA
           2049 PLASMAS
         501975 PLASMA
                  (PLASMA OR PLASMAS)
        2378303 BLOOD
            558 BLOODS
        2378377 BLOOD
                  (BLOOD OR BLOODS)
         534913 SERUM
            603 SERUMS
          80591 SERA
             11 SERAS
         579953 SERUM
                  (SERUM OR SERUMS OR SERA OR SERAS)
L12           10 L3 AND L8 AND L9 AND L10

=> duplicate remove
ENTER L# LIST OR (END):l11-l12
DUPLICATE PREFERENCE IS 'CA, BIOSIS'
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.85      32.94

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PROCESSING COMPLETED FOR L12
L13           26 DUPLICATE REMOVE L11-L12 (7 DUPLICATES REMOVED)
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=> d l13 1-26 bib ab

L13 ANSWER 1 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 140:25190 CA
TI Non-affinity purification of proteins
IN Fahner, Robert Lee; Follman, Deborah; Lebreton, Benedicte; Van Reis, Robert
PA Genetech, Inc., USA
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003102132	A2	20031211	WO 2003-US13054	20030425
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003229212	A1	20031211	US 2003-423299	20030425
PRAI US 2002-375953P	P	20020426		

AB A method is disclosed for purifying a target protein from a mixture containing a host cell protein, comprising subjecting said mixture to: (a) a non-affinity purification step, followed by (b) high-performance tangential-flow filtration (HPTFF), and (c) isolating said protein in a purity containing less than 100 ppm of said host cell protein, wherein said method includes no affinity purification step.

L13 ANSWER 2 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 140:159845 CA
TI **Hydrophobic interaction chromatography** of proteins II. Binding capacity, recovery and mass transfer properties
AU Hahn, Rainer; Deinhofer, Karin; Machold, Christine; Jungbauer, Alois
CS Institute for Applied Microbiology, University of Agricultural Sciences, Vienna, Muthgasse, A-1190, Austria
SO Journal of Chromatography, B: Analytical Technologies in the Biomedical and Life Sciences (2003), 790(1-2), 99-114
CODEN: JCBAAI; ISSN: 1570-0232
PB Elsevier Science B.V.
DT Journal
LA English
AB **Hydrophobic interaction chromatog.** media suited for large scale sepns. were compared regarding dynamic binding capacity, recovery and mass transfer properties. In all cases, pore diffusion was the rate limiting step. Reduced heights equivalent to a theor. plate for bovine **serum albumin** derived from breakthrough curves at reduced velocities between 60 and 1500 ranged from 10 to 700. Pore diffusion coeffs. were derived from pulse response expts. for the model proteins α-lactalbumin, lysozyme, β-lactoglobulin, bovine **serum albumin** and IgG. Diffusivity of lysozyme did not follow the trend of decreasing diffusivity with increasing mol. mass, as observed for the rest of the proteins. In general, mass transfer coeffs. were smaller compared to ion-exchange chromatog. Dynamic binding capacities for the model protein bovine

serum albumin varied within a broad range. However, sorbents based on polymethacrylate showed a lower dynamic capacity than media based on Sepharose. Some sorbents could be clustered regarding binding capacity affected by salt. These sorbents exhibited a disproportional increase of binding capacity with increasing ammonium sulfate concentration Recovery of proteins above 75% could be observed for all sorbents. Several sorbents showed a recovery close to 100%.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 137:17132 CA
TI Purification of human acid α-glucosidase for use in enzyme replacement therapy
IN Reuser, Arnold J.; Van Der Ploeg, Ans T.
PA Neth.
SO U.S. Pat. Appl. Publ., 58 pp., Cont.-in-part of U.S. Ser. No. 770,253.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002073438	A1	20020613	US 2001-886477	20010622
	NZ 501784	A	20010629	NZ 1996-501784	19960731
	EP 1262191	A1	20021204	EP 2002-18187	19960731
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 2003097665	A1	20030522	US 2000-516332	20000301
	US 2002013953	A1	20020131	US 2001-770496	20010129
	US 2002157123	A1	20021024	US 2001-14511	20011214
	US 2004003421	A1	20040101	US 2003-351255	20030123
PRAI	US 1995-1796P	P	19950802		
	US 1998-111291P	P	19981207		
	US 2001-770253	A2	20010129		
	US 1996-700760	A1	19960729		
	EP 1996-928405	A3	19960731		
	NZ 1996-316047	A1	19960731		
	US 2000-516332	B1	20000301		
	US 2001-770496	A1	20010129		

AB The invention provides methods of purifying lysosomal proteins, pharmaceutical compns. for use in enzyme replacement therapy, and methods of treating Pompe's disease using purified human acid α-glucosidase. The invention provides a method of purifying human acid a-glucosidase comprising: (a) applying a sample containing human acid α-glucosidase and contaminating proteins to an anion exchange or an affinity column under conditions in which the α-glucosidase binds to the column; (b) collecting an eluate enriched in α-glucosidase from the anion exchange or affinity column; (c) applying the eluate to (i) a hydrophobic interaction column under conditions in which α-glucosidase binds to the column and then collecting a further eluate further enriched in α-glucosidase, or (ii) contacting the eluate with hydroxylapatite under conditions in which α-glucosidase does not bind to hydroxylapatite and then collecting the unbound fraction enriched in α-glucosidase.

L13 ANSWER 4 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 136:180181 CA
TI Method for kidney disease detection and treatment through determination of proteinuria using immunological or nonimmunological techniques
IN Comper, Wayne D.
PA Australia
SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 415,217.

CODEN: USXXCO
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002022236	A1	20020221	US 2001-892797	20010628
	US 6589748	B2	20030708		
	US 2002110799	A1	20020815	US 1999-415217	19991012
	US 6447989	B2	20020910		
	ZA 2001005058	A	20020620	ZA 2001-5058	20010620
	US 2004029175	A1	20040212	US 2003-391202	20030319
PRAI	AU 1998-7843	A	19981221		
	US 1999-415217	A2	19991012		
	US 2001-892797	A2	20010628		

AB A method is disclosed for diagnosing early stage of a disease in which an intact protein found in urine is an indicator of the disease. The method includes assaying urine sample to detect the presence of modified protein using either immunol. or non-immunol. technique. Methods for preventing and treating the disease are also disclosed. Urine samples of normal and diabetic patients were analyzed by size-exclusion chromatog. and HPLC. Modified **albumin** was detected in and purified from the urine of diabetic patients.

L13 ANSWER 5 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 136:131255 CA
TI Methods for early diagnosis of kidney disease and treatment by drug intervention using lysosome activating compounds
IN Comper, Wayne D.
PA Austria
SO U.S. Pat. Appl. Publ., 30 pp., Cont.-in-part of U.S. Ser. No. 415,217.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002012906	A1	20020131	US 2001-893346	20010628
	US 2002110799	A1	20020815	US 1999-415217	19991012
	US 6447989	B2	20020910		
	WO 2000037944	A1	20000629	WO 1999-IB2029	19991220
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA 2001005058	A	20020620	ZA 2001-5058	20010620
PRAI	AU 1998-7843	A	19981221		
	US 1999-415217	A2	19991012		
	WO 1999-IB2029	W	19991220		

AB A method is disclosed for diagnosing early stage of a disease in which an intact protein found in urine is an indicator of the disease, followed by early drug intervention to prevent and treat the disease are also disclosed. The drug treatment involves the use of a lysosome activating compound Urine samples of normal and diabetic patients were analyzed by size-exclusion chromatog. and HPLC.

L13 ANSWER 6 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 138:233795 CA

TI Identification, characterization, and cloning of an **immunoglobulin** degrading enzyme in the cat flea, Ctenocephalides felis
AU Silver, Gary M.; Gaines, Patrick J.; Hunter, Shirley W.; Maddux, Joely D.; Thomas, Rex E.; Wisnewski, Nancy
CS Heska Corporation, Fort Collins, CO, 80525, USA
SO Archives of Insect Biochemistry and Physiology (2002), 51(3), 136-150
CODEN: AIBPEA; ISSN: 0739-4462
PB Wiley-Liss, Inc.
DT Journal
LA English
AB The degradation of cat IgG in **blood**-fed adult C. felis midguts was examined SDS-PAGE anal. of dissected midgut exts. obtained from C. felis that had been **blood** fed for various times between 0 to 44 h revealed that by 24 h most of the high mol. weight proteins, including the heavy chain of IgG, were digested. A 31-kDa serine protease with IgG degrading activity was purified from fed C. felis midguts by benzamidine affinity chromatog., **hydrophobic interaction chromatog.**, and cation exchange chromatog. Three primary cleavage products between 30- and 40-kDa were observed when the purified protease was incubated with protein A purified cat IgG. N-terminal amino acid sequence anal. of the products revealed that the IgG degrading protease cleaves after specific cysteine and lysine residues within the hinge region of IgG. The enzyme is also capable of degrading other **Igs**, **serum albumin**, and Hb, suggesting that it may have roles in both combating the host's immune system and providing nutrients for the flea. A cDNA clone encoding the 265 amino acid IgG degrading protease proenzyme was isolated. When expressed in a baculovirus/insect cell expression system, the recombinant protein had the same N-terminus as the processed 237 amino acid mature native protein and possessed IgG degrading activity indistinguishable from the native protein.
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 138:299943 CA
TI **Hydrophobic interaction chromatography** of proteins I. Comparison of selectivity
AU Machold, Christine; Deinhofer, Karin; Hahn, Rainer; Jungbauer, Alois
CS Institute for Applied Microbiology, University of Agricultural Sciences, Vienna, A-1190, Austria
SO Journal of Chromatography, A (2002), 972(1), 3-19
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
AB Currently, the selection of a **hydrophobic interaction chromatog.** (HIC) sorbent for protein separation purposes is entirely based on empirical means. An attempt was made to characterize different HIC sorbents from various manufacturers. The selectivity was determined by isocratic pulse expts. of a set of reference proteins and an algorithm was developed to classify the sorbents according to their selectivity and hydrophobicity. The obtained semi-quant. parameters take into account the dependence of salt on adsorption. The sorbent characteristics evaluated with the model proteins were compared to the separation of a real feedstock. A good agreement was achieved between the developed evaluation procedure and the separation behavior of the real feed stock.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 135:207898 CA
TI Method for separating and purifying protein
IN Uchida, Kazuhisa; Yamasaki, Motoo

PA Kyowa Hakko Kogyo Co., Ltd., Japan
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001064711	A1	20010907	WO 2001-JP1610	20010302
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001036047	A5	20010912	AU 2001-36047	20010302
EP 1260518	A1	20021127	EP 2001-908239	20010302
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003023043	A1	20030130	US 2002-220494	20020830
PRAI JP 2000-57672	A	20000302		
WO 2001-JP1610	W	20010302		

AB A method is provided for economically producing a highly pure protein (e.g., antibody) usable in drugs by constructing a system whereby a protein sustaining desired properties can be efficiently purified at a high yield upon changing the physicochem. property (e.g., isoelec. point, strength of hydrophobic nature) inherent to the protein. The physicochem. property of the protein is changed by a method for performing the deletion/substitution/addition of the amino acid constituting the protein or a method for producing a fusion protein with other protein. The method for separating and purifying the altered protein sustaining desired properties comprises a process of using at least one chromatog. selected from hydrophobic chromatog. and ion exchange chromatog. Anti-ganglioside GM2 antibody and anti-human interleukin 5 receptor α chain antibody are resp. purified to a desired degree by this method.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 134:105828 CA
TI Method for the chromatographic separation of **blood plasma** or **serum** into **albumin** and **immunoglobulin**-containing fractions
IN Kothe, Norbert; Rudnick, Dieter; Kloft, Michael
PA Biotest Pharma G.m.b.H., Germany
SO Ger. Offen., 18 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 19932782	A1	20010118	DE 1999-19932782	19990714
WO 2001005809	A1	20010125	WO 2000-EP5827	20000623
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				

✓ instead previous documents

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1194442 A1 20020410 EP 2000-938817 20000623

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI DE 1999-19932782 A 19990714

WO 2000-EP5827 W 20000623

AB The invention concerns the **hydrophobic interaction chromatog.** separation of **blood plasma/serum** into two fractions; the first fraction that contains **albumin,** antithrombin III and transferrin; and the second fraction that contains **Igs,** especially IgG, by applying gradient ammonium sulfate elution. Starting material is a human **plasma** cryoppt. that is free of **blood** coagulation factor VIII and factors II, VII, IX, X (PPSB-complex). Concentration gradient is decreased during elution from 0.8-1.0 M to 0.3-0 M. The process includes the known sterile-filtration and virus inactivation steps.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 26 CA COPYRIGHT 2004 ACS on STN

AN 133:57150 CA

TI The diagnosis and monitoring of treatment for the early stages of renal disease and/or renal complications of disease through the determination of proteinuria using immunological or non-immunological techniques

IN Comper, Wayne D.

PA Monash University, Australia

SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000037944	A1	20000629	WO 1999-IB2029	19991220
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002110799	A1	20020815	US 1999-415217	19991012
	US 6447989	B2	20020910		
	CA 2356174	AA	20000629	CA 1999-2356174	19991220
	BR 9916407	A	20010925	BR 1999-16407	19991220
	EP 1141728	A1	20011010	EP 1999-959616	19991220
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002533680	T2	20021008	JP 2000-589950	19991220
	ZA 2001005058	A	20020620	ZA 2001-5058	20010620
	US 2002012906	A1	20020131	US 2001-893346	20010628
PRAI	AU 1998-7843	A	19981221		
	US 1999-415217	A	19991012		
	WO 1999-IB2029	W	19991220		

AB A method is disclosed for diagnosing early stage of a disease in which an intact protein found in urine is an indicator of the disease. The method includes assaying urine sample to detect the presence of modified protein using either immunol. or non-immunol. technique. Methods for preventing and treating the disease are also disclosed.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 11 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 4
AN 133:278152 CA
TI Protein losses in ion-exchange and hydrophobic interaction high-performance liquid chromatography
AU Goheen, S. C.; Gibbins, B. M.
CS Pacific Northwest National Laboratory, Richland, WA, 99352, USA
SO Journal of Chromatography, A (2000), 890(1), 73-80
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier Science B.V.
DT Journal
LA English
AB Protein losses in ion-exchange and **hydrophobic interaction HPLC** were examined The supports were all non-porous, packed in columns of identical dimensions. Two ion-exchange chromatog. (IEC), anion and cation, as well as a **hydrophobic interaction chromatog.** (HIC) columns were tested. Proteins included cytochrome c, bovine **serum albumin** (BSA), IgG and fibrinogen. Temperature effects on HIC supports were studied for cytochrome c and BSA. Both retention times and recoveries of the proteins were measured. The influence of column residence time on the recovery of proteins was also investigated. We found a linear relationship between the amount of protein recovered and the log of the mol. mass. Retention times also generally increased with temperature for both HIC and IEC. Other trends in retention behavior and recoveries are discussed.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 12 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 131:268984 CA
TI Chromatographic purification of human acid α-glucosidase and its use for treatment of Pompe's disease
IN Van Corven, Emile; Weggeman, Miranda
PA Pharming Intellectual Property B.V., Neth.
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9951724	A1	19991014	WO 1999-EP2475	19990406
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9935229	A1	19991025	AU 1999-35229	19990406
	EP 1071756	A1	20010131	EP 1999-916916	19990406
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002510485	T2	20020409	JP 2000-542437	19990406
PRAI	GB 1998-7464	A	19980407		
	WO 1999-EP2475	W	19990406		

AB The invention provides methods of purifying human acid α-glucosidase, particularly from the milk of transgenic animals.

The methods employ two chromatog. steps. The first step is usually anion exchange chromatog. and the second step is **hydrophobic interaction chromatog.** The purification procedure readily generates human α-glucosidase in at least 99 % weight/weight purity. Also provided are pharmaceutical compns. and methods for using purified human acid α-glucosidase in treatment of patients with Pompe's disease.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 13 OF 26 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1998:266777 BIOSIS
DN PREV199800266777
TI Salt-promoted adsorption of proteins onto amphiphilic agarose-based adsorbents: II. Effects of salt and salt concentration.
AU Oscarsson, S. [Reprint author]; Karsnas, P.
CS Dep. Chem. Eng., Malardalen Univ., Box 325, 631 05 Eskilstuna, Sweden
SO Journal of Chromatography A, (April 17, 1998) Vol. 803, No. 1-2, pp. 83-93. print.
CODEN: JOCRAM. ISSN: 0021-9673.
DT Article
LA English
ED Entered STN: 24 Jun 1998
Last Updated on STN: 13 Aug 1998
AB The effects of different types of salts and salt concentrations on the selectivity in the adsorption of **serum** proteins have been compared for the amphiphilic agarose-based adsorbents Phenyl-Sepharose, Octyl-Sepharose, butyl-agarose and mercaptopyridine-derivatized agarose. By use of multivariate analysis, the complex interrelationships for the different combined effects were evaluated. From these analyses conclusions about similarities and/or dissimilarities in the mechanisms involved in adsorption of proteins on respective adsorbent were made.

L13 ANSWER 14 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 122:298782 CA
TI Identification of some of the physicochemical characteristics of microspheres which influence the induction of the immune response following mucosal delivery
AU Alpar, Hazire Oya; Almeida, Antonio Jose
CS Pharm. Sci. Inst., Aston Univ., Birmingham, B4 7ET, UK
SO European Journal of Pharmaceutics and Biopharmaceutics (1994), 101(4), 198-202
CODEN: EJPBEL; ISSN: 0340-8159
DT Journal
LA English
AB Poly(L-lactide) (PLA) microspheres have proven adjuvanticity and are used in antigen delivery. The changes in surface hydrophobicity and ζ potential of PLA microspheres following adsorption or encapsulation of model protein antigens were studied by **hydrophobic interaction chromatog.** and ζ potential anal. Protein adsorption followed the classical Langmuirian model and is probably influenced by polar interactions. Protein adsorption elevated surface hydrophobicity of particles, the degree depending on the protein employed. Adsorption of bovine **serum albumin** influences the increase more than γ **-globulin** and tetanus toxoid (TT). Uncoated and protein-coated PLA microspheres are far less hydrophobic than those of latex controls. Hydrophobicity was also influenced by the surfactant employed in the microspheres' manufacture i.e. polyvinyl alc. and Tween 80. The strongly hydrophobic TT prepns. were more active in promoting a strong and lasting immune response compared to those of lower hydrophobicity. It is suggested that hydrophobicity is important for design of vaccine carriers targeted to immunocompetent cells.

L13 ANSWER 15 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 123:208645 CA
Correction of: 122:298782
TI Identification of some of the physicochemical characteristics of microspheres which influence the induction of the immune response following mucosal delivery
AU Alpar, Hazire Oya; Almeida, Antionio Jose
CS Pharm. Sci. Inst., Oston Univ., Birmingham, B4 7ET, UK
SO European Journal of Pharmaceutics and Biopharmaceutics (1994), 40(4), 198-202
CODEN: EJPBEL; ISSN: 0939-6411
PB Wissenschaftliche Verlagsgesellschaft
DT Journal
LA English
AB Poly(L-lactide) (PLA) microspheres have proven adjuvanticity and are used in antigen delivery. The changes in surface hydrophobicity and ζ potential of PLA microspheres following adsorption or encapsulation of model protein antigens were studied by **hydrophobic interaction chromatog.** and ζ potential anal. Protein adsorption followed the classical Langmuirian model and is probably influenced by polar interactions. Protein adsorption elevated surface hydrophobicity of particles, the degree depending on the protein employed. Adsorption of bovine **serum albumin** influences the increase more than γ -**globulin** and tetanus toxoid (TT). Uncoated and protein-coated PLA microspheres are far less hydrophobic than those of latex controls. Hydrophobicity was also influenced by the surfactant employed in the microspheres' manufacture, i.e., polyvinyl alc. and Tween 80. The strongly hydrophobic TT prepns. were more active in promoting a strong and lasting immune response compared to those of lower hydrophobicity. It is suggested that hydrophobicity is important for design of vaccine carriers targeted to immunocompetent cells.

L13 ANSWER 16 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 5
AN 116:37207 CA
TI Bead cellulose derivatives as supports for immobilization and chromatographic purification of proteins
AU Boeden, H. F.; Pommerening, K.; Becker, M.; Rupprich, C.; Holtzhauer, M.; Loth, F.; Mueller, R.; Bertram, D.
CS Cent. Inst. Mol. Biol., Berlin, O-1115, Germany
SO Journal of Chromatography (1991), 552(1-2), 389-414
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
AB Characteristic data are presented for Divicell, a macroporous bead cellulose with excellent flow parameters. The preparation of Divicell derivs. and their properties are described with respect to their application as chromatog. supports. The ion exchangers Divicell DEAE and Divicell CM were manufactured in 2 types with different exclusion limits and an available capacity for proteins of up to 100 mg/mL gel. Divicell Blue is a bead cellulose with covalently bound Cibacron Blue F3G-A and was a very suitable adsorbent for the selective separation and purification of human **serum albumin**. Activation of Divicell with Na periodate, epichlorohydrin, and 5-norbornene-2,3-dicarboximido carbonochloridate provided activated supports used for immobilization of ligands in organic solvents and in aqueous solns. Coupling of amines, diamines, amino acids, carbohydrates, and proteins is described. The immobilized ligands retained their biol. activity as determined by their specific adsorption of proteins. Divicell alkyl derivs. were tested in **hydrophobic interaction chromatog.** with bovine **serum albumin** as a model. Examples are presented of the application of Divicell derivs. to the purification of biomacromols. such as

Igs and lectins by affinity chromatog. The results were comparable to those obtained by using the corresponding Sepharose-derived adsorbents.

L13 ANSWER 17 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 114:58483 CA
TI Removal of process chemicals from labile biological mixtures by **hydrophobic interaction chromatography**
IN Bonomo, Richard J.
PA New York Blood Center, Inc., USA
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 366946	A1	19900509	EP 1989-118199	19890930
	EP 366946	B1	19940302		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 5094960	A	19920310	US 1988-256332	19881007
	CA 1337052	A1	19950919	CA 1989-610272	19890905
	AU 8941559	A1	19900913	AU 1989-41559	19890919
	AU 621148	B2	19920305		
	AT 102071	E	19940315	AT 1989-118199	19890930
	ES 2051951	T3	19940701	ES 1989-118199	19890930
	JP 02198561	A2	19900807	JP 1989-257179	19891003
	JP 2799747	B2	19980921		
	KR 9707941	B1	19970519	KR 1989-14221	19891004
PRAI	US 1988-256332	A	19881007		
	EP 1989-118199	A	19890930		

AB Lipid-soluble process chems. are removed from biomaterials by **hydrophobic interaction chromatog.** on a C6-24 (preferably C18) resin. Biol. activity is substantially retained, and little or no biomaterial is adsorbed on the column. The process is especially useful for removing virus-inactivating substances, such as detergents, from **blood** and **blood** components. In **plasma** containing Triton X-100 (I) at 1% weight/volume, chromatog. on C18 silica washed with Me2CHOH decreased I concentration to .apprx.4.69 ppm, while maintaining 80-95% of clotting activity of the **plasma**. Recovery of coagulation factors VIII and V was .apprx.80 and .apprx.84%, resp.

L13 ANSWER 18 OF 26 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1990:193668 BIOSIS
DN PREV199089100339; BA89:100339
TI ANALYSIS OF HUMAN TEAR PROTEINS BY DIFFERENT HIGH-PERFORMANCE LIQUID CHROMATOGRAPHIC TECHNIQUES.
AU BAIER G [Reprint author]; WOLLENSAK G; MUR E; REDL B; STOEFFLER G; GOETTINGER W
CS INST MIKROBIOLOGIE DER MEDIZINISCHEN FAKULTAET UNIV INNSBRUCK, FRITZ PREGLSTRASSE 3, 6020 INNSBRUCK, AUSTRIA
SO Journal of Chromatography Biomedical Applications, (1990) Vol. 525, No. 2, pp. 319-328.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 24 Apr 1990
Last Updated on STN: 25 Apr 1990
AB A comparison of the efficiencies of **hydrophobic interaction chromatography**, ion-exchange chromatography, reversed-phase chromatography and gel permeation chromatography in the separation of tear proteins was made using a variety of different buffers.

Separation of **immunoglobulins**, lactoferrin, **albumin**, PMFA (protein migrating faster than **albumin**) and lysozyme was accomplished by gel permeation chromatography in less than 30 min using a TSK-type SW3000 column equilibrated with ammonium acetate buffer (pH 4.1) with a high reproducibility. When gel permeation chromatography was used as a completely automated diagnostic method, only minute volumes (1.0 μl) of tear samples were necessary for the quantitative analyiss of proteins. The other three methods proved to be more suitable for the preparation of individual tear proteins but were less suitable for their quantitation.

L13 ANSWER 19 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 114:21484 CA
TI Interaction between endogenous circulating sulfated-glycosaminoglycans and **plasma** proteins
AU Pasquali, F.; Oldani, C.; Ruggiero, M.; Magnelli, L.; Chiarugi, V.; Vannucchi, S.
CS Ist. Patol. Gen. Firenze, Florence, 50134, Italy
SO Clinica Chimica Acta (1990), 192(1), 19-27
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English
AB Interaction between endogenous **plasma** [35S]glycosaminoglycans and proteins in murine **plasma** was demonstrated by coelution from gel chromatog. of circulating [35S]glycosaminoglycans with a wide range of **plasma** proteins. Autoradiog. of electrophoretic tracing of proteins from 35S-labeled **plasma** showed that labeled glycosaminoglycans were associated with alpha1, alpha2, and beta globulins, and **albumin**, but not with **gamma globulins**. Anal. by gel chromatog. on Sepharose CL-6B of delipidated 35S-labeled **plasma** after either proteolysis or beta-elimination, suggested that 35S-labeled glycosaminoglyan chains were covalently bound to proteins. Lipids were probably involved in the supramol. assembly of GAGs with **plasma** proteins, as shown by **hydrophobic interaction chromatog.** In addition, strong, non-covalent interaction between glycosaminoglycan chains and proteins was responsible for the difficulty in extracting free glycosaminoglycans from **plasma**. Consistently, ion-exchange chromatog. of 35S-sulfate labeled delipidated **plasma** after alkali treatment revealed that the anionic properties of glycosaminoglycans were hampered when **plasma** proteins were present.

L13 ANSWER 20 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 111:111792 CA
TI High performance **hydrophobic interaction chromatography**: a simple method to purify proteins
AU Gisch, Daryl J.; Reid, Terrence S.
CS Supelco, Inc., Bellefonte, PA, 16823, USA
SO BioChromatography (1989), 4(2), 74-7
CODEN: BCHREF; ISSN: 0888-4404
DT Journal
LA English
AB A small (100 + 4.6 mm), silica-based, diol type column was evaluated for **hydrophobic interaction chromatog.** analyses of globular protein stds. and crude sample matrixes. The phys. and chemical stability, after long exposure to high salt mobile phases, was excellent. The column demonstrated the ability to resolve proteins in accordance with their hydrophobicity, while maintaining biol. activity.

L13 ANSWER 21 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 6
AN 109:226153 CA
TI Isolation of **immunoglobulins** and their use in immunoaffinity HPLC

AU Josic, D.; Hofmann, W.; Habermann, R.; Schulzke, J. D.; Reutter, W.
CS Inst. Molekularbiol. Biochem., Freie Univ. Berlin, Berlin, D-1000/33, Fed. Rep. Ger.
SO Journal of Clinical Chemistry and Clinical Biochemistry (1988), 26(9), 559-68
CODEN: JCCBDT; ISSN: 0340-076X
DT Journal
LA English
AB For the isolation of monoclonal and polyclonal antibodies different HPLC and high-performance affinity chromatog. (HPAC) method were investigated. Specially designed mixed-bed ion-exchange and hydroxylapatite columns as well as hydrophobic interaction columns were efficiently applied to the isolation of monoclonal antibodies. When these methods are used for the isolation of polyclonal antibodies from antiserum, the sample has to be pretreated, e.g., by removal of **serum albumin**.
Protein A HPAC is an easy method and quick to handle, especially for the preparative isolation of antibodies. The antibodies that do not bind to protein A, can be purified by protein G HPAC. If this method cannot be used because of the rather extreme elution conditions, hydroxylapatite, ion-exchange, or **hydrophobic interaction HPLC**
have to be considered as alternatives. The authors further concentrated on immunoaffinity HPLC with immobilized antibodies. This method has proved to be very effective for 1-step isolation of antigens, even from very complex samples such as **plasma** membrane exts. The problem with immunoaffinity HPLC is the quick deterioration of the columns, caused by increasing denaturing of the immobilized antibodies during elution. To solve this problem, an indirect method is recommended for anal. immunoaffinity HPLC. For this purpose, the antibodies are bound to a protein A HPAC column. The solution containing the antigens is then applied. After washing, the antigen-antibody complex is eluted from the column.

L13 ANSWER 22 OF 26 CA COPYRIGHT 2004 ACS on STN DUPLICATE 7
AN 105:149106 CA
TI Hydrophobic interaction fast protein liquid chromatography of milk proteins
AU Chaplin, L. C.
CS Food Struct. Dep., AFRC Inst. Food Res., Shinfield/Reading, RG2 9AT, UK
SO Journal of Chromatography (1986), 363(2), 329-35
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
AB Bovine whey proteins and caseins were separated by **hydrophobic interaction chromatog.** with the new column,
phenyl-Superose. Total casein was separated by using a decreasing gradient of 0.8-0.05M Na phosphate and a constant 3.75M urea concentration of pH 6.0. The order of elution of caseins was $\beta < \gamma, \alpha s2 < \kappa <$
$\alpha s1$, and β-casein was always eluted first. Whey proteins were separated with a decreasing salt gradient of 1.5-0M $(NH_4)_2SO_4$ in 0.05M Na phosphate at pH 7.0. The order of elution was β-lactoglobulin < bovine **serum albumin** < **Ig** <
α-lactalbumin. The elution order of proteins from the column did not correlate with the calculated average hydrophobicities but the method was considered to be a measure of the effective hydrophobicity of proteins and therefore of more use for attempting to relate hydrophobicity to functional properties of proteins. The method has significant advantages over conventional techniques, allowing rapid optimization of elution conditions and reducing run times from $\geq$24 h to <2 h.

L13 ANSWER 23 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 103:103013 CA
TI Purification of human **serum gamma globulins** by hydrophobic interaction high-performance liquid chromatography
AU Goheen, Steven C.; Matson, Robert S.

CS Bio-Rad Lab., Richmond, CA, 94804, USA
SO Journal of Chromatography (1985), 326, 235-41
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
AB Fresh, whole human **serum** was fractionated on a Bio-Rad Protein Chromatog. System, equipped with a Bio-Gel TSK Phenyl-5PW column, by utilizing a descending linear gradient of (NH4)2SO4 in 0.1M Na phosphate buffer, pH 7.0, at 0°. Two major peaks were isolated corresponding to **albumin** and γ -**globulin**. The identity of these protein peaks was substantiated by chromatog. of an **albumin**-γ -**globulin** standard mixture The purity of the individual fractions was verified by high-performance size exclusion chromatog. (HPSEC) on either a Bio-Sil TSK-250 or a Bio-Gel TSK-40 column. The applicability of these HPSEC columns to the mol. weight characterization of the Bio-Gel TSK Phenyl-5PW column fractions was compared. Typically, the Bio-Gel TSK Phenyl-5PW column (75 + 7.5 mm, inner diameter) was used to purify γ -**globulin** from 100 μL of **plasma**. This corresponded to .apprx.1.5-2.0 mg of the globin fraction. Unidentified contaminants in this fraction had mol. wts. of .apprx.1000-3000 and 26,0000-30,0000 daltons.

L13 ANSWER 24 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 102:109355 CA
TI Hydrophobicity of protein-coated polymers: quantitation by means of the advancing solidification front technique
AU Absolom, D. R.; Policova, Z.
CS Res. Inst., Hosp. Sick Child., Toronto, ON, M5G 1X8, Can.
SO Journal of Dispersion Science and Technology (1985), 6(1), 15-36
CODEN: JDTEDS; ISSN: 0193-2691
DT Journal
LA English
AB The title method has the advantage that the protein-coated particle does not have to be exposed to an air interface which would denature the adsorbed protein layer. The technique also was used to establish whether substrates with different surface tensions would induce a different extent of conformational change in the adsorbed protein mols. Such changes are reflected by differences in the surface tension of different substrate materials coated by the same protein. The results with a low bulk protein concentration (<0.1%) show a decreasing surface tension of the adsorbed protein layer with increasing substrate hydrophobicity, suggesting more extensive conformational changes on the more hydrophobic surfaces. At high bulk protein concns. (≥0.5%), the surface tension of the adsorbed protein layer is independent of the substrate material. Advancing solidification front measurements with different proteins adsorbed onto the substrate material, octyl-Sepharose beads, indicate that the hydrophobicity of the protein-coated Sepharose increases in the following order: bovine **albumin** < human **albumin** < IgG < fibrinogen. These results are in good agreement with the relative hydrophobicity of these proteins determined by other techniques such as **hydrophobic-interaction chromatog.**, protein adsorption, 2-phase partition, and contact angle detns. The studies are of interest in the use of implants that become coated with proteins.

L13 ANSWER 25 OF 26 CA COPYRIGHT 2004 ACS on STN
AN 97:141107 CA
TI **Hydrophobic interaction chromatography** of **serum** proteins on Phenyl-Sepharose CL-4B
AU Hrkal, Z.; Rejnkova, J.
CS Inst. Haematol. Blood Transfus., Prague, 128 20/2, Czech.
SO Journal of Chromatography (1982), 242(2), 385-8
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal

LA English
AB After removal of most of the interfering **albumin** from human **blood serum** by precipitation with Rivanol, the other **serum** proteins were fractionated by **hydrophobic-interaction chromatog.** on Phenyl-Sepharose CL 4B with elution by a linear gradient of decreasing (NH4)2SO4 concentration Whereas chromatog. of untreated **blood serum** gave only 3 peaks, each containing large amts. of **albumins**, chromatog. of Rivanol-treated **serum** produced 6 peaks with less **albumin** contamination. The method is useful for the preparation of crude orosomucoid, transferrin, and **Ig** fractions in 1 step.

L13 ANSWER 26 OF 26 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 1979:173557 BIOSIS
DN PREV197967053557; BA67:53557
TI USE OF IMMOBILIZED LECTINS AND OTHER LIGANDS FOR THE PARTIAL PURIFICATION OF ERYTHROPOIETIN.
AU SPIVAK J L [Reprint author]; SMALL D; SHAPER J H; HOLLENBERG M D
CS CLAYTON LAB, TRAYLOR 924, 720 RUTLAND AVE, BALTIMORE, MD 21205, USA
SO Blood, (1978) Vol. 52, No. 6, pp. 1178-1188.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Article
FS BA
LA ENGLISH
AB The ability of a variety of affinity adsorbents to isolate [human] erythropoietin (Ep) from contaminating proteins in crude preparations of the hormone was examined. Of 13 lectin-agarose derivatives, 6 bound Ep but only 2, wheat germ agglutinin (WGA) and phytohemagglutinin (PHA), bound the hormone quantitatively. The extent to which PHA bound Ep depended on the isolectin composition of the PHA. The leukoagglutinating form (L-PHA) failed to bind the hormone completely, while the erythroagglutinating form (E-PHA) had such a high affinity for Ep that it could be released only with 4 M guanidine hydrochloride (pH 7.0). PHA-P, which contains both the E and L isolectins, bound Ep quantitatively, and the hormone could be partially released by N-acetylgalactosamine or sialic acid. Ep bound to WGA-agarose could be partially released with N-acetylglucosamine or sialic acid; with N,N-diacetylchitobiose recovery was quantitative. Two adsorbents, Cibacron Blue F3GA and octylsuccinic anhydride, which have a high affinity for **albumin**, a major contaminant of crude Ep preparations, also bound Ep quantitatively. Agarose-bound antialbumin Ig[**immunoglobulin**]G was effective in removing **albumin** from crude hormone preparations without adsorbing a significant quantity of Ep. Neither agarose-bound neuraminidase nor **hydrophobic interaction chromatography** employing agarose coated with substituted or unsubstituted hydrocarbon chains separated Ep from contaminating proteins in crude preparations of the hormone.

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-15.18	-15.18

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2	99	(530/390.1).CCLS.	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:08
3	124	(530/390.5).CCLS.	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:08
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8	96	(424/177.1).CCLS.	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:09
9	769	((530/364).CCLS.) or ((530/390.1).CCLS.) or ((530/390.5).CCLS.) or ((530/415).CCLS.) or ((424/176.1).CCLS.) or ((424/177.1).CCLS.)	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:09
10	5503	hydrophobic adj interacti$2 adj chromatograph$6	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:12
11	40	hydrophobic adj interacti$2 adj HPLC	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:12
12	14	hydrophobic adj interacti$2 adj High adj Performance adj Liquid adj Chromatograph$2	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:13
13	1849	HIC	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:18
14	93	TSK adj phenyl	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:18
15	95	Toyopearl adj phenyl	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:19
16	3	phenyl adj sepahrose	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:19
17	0	phenylsepahrose	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:20
18	130	bio adj2 TSK	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:20
19	78	bio$3 adj TSK	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:20

20	7158	(hydrophobic adj interacti$2 adj chromatograph$6) or (hydrophobic adj interacti$2 adj HPLC) or (hydrophobic adj interacti$2 adj High adj Performance adj Liquid adj Chromatograph$2) or HIC or (TSK adj phenyl) or (Toyopearl adj phenyl) or (phenyl adj sepahrose) or phenylsepahrose or (bio adj2 TSK) or (bio$3 adj TSK)	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:21
21	145447	serum	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:21
22	317030	plasma	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:21
23	346806	blood	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:21
24	44790	immunoglobulin$3	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:22
25	575	gammaglobulin$3	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:22
26	78010	albumin$2	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:23
27	645114	serum or plasma or blood or immunoglobulin$3 or gammaglobulin$3 or albumin$2	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:24
28	46	(((530/364).CCLS.) or ((530/390.1).CCLS.) or ((530/390.5).CCLS.) or ((530/415).CCLS.) or ((424/176.1).CCLS.) or ((424/177.1).CCLS.)) and ((hydrophobic adj interacti$2 adj chromatograph$6) or (hydrophobic adj interacti$2 adj HPLC) or (hydrophobic adj interacti$2 adj High adj Performance adj Liquid adj Chromatograph$2) or HIC or (TSK adj phenyl) or (Toyopearl adj phenyl) or (phenyl adj sepahrose) or phenylsepahrose or (bio adj2 TSK) or (bio$3 adj TSK))	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:24
29	272	((hydrophobic adj interacti$2 adj chromatograph$6) or (hydrophobic adj interacti$2 adj HPLC) or (hydrophobic adj interacti$2 adj High adj Performance adj Liquid adj Chromatograph$2) or HIC or (TSK adj phenyl) or (Toyopearl adj phenyl) or (phenyl adj sepahrose) or phenylsepahrose or (bio adj2 TSK) or (bio$3 adj TSK)) same (serum or plasma or blood or immunoglobulin$3 or gammaglobulin$3 or albumin$2)	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:25

30	12	((((530/364).CCLS.) or ((530/390.1).CCLS.) or ((530/390.5).CCLS.) or ((530/415).CCLS.) or ((424/176.1).CCLS.) or ((424/177.1).CCLS.)) and ((hydrophobic adj interacti$2 adj chromatograph$6) or (hydrophobic adj interacti$2 adj HPLC) or (hydrophobic adj interacti$2 adj High adj Performance adj Liquid adj Chromatograph$2) or HIC or (TSK adj phenyl) or (Toyopearl adj phenyl) or (phenyl adj sepahrose) or phenylsepahrose or (bio adj2 TSK) or (bio$3 adj TSK))) and (((hydrophobic adj interacti$2 adj chromatograph$6) or (hydrophobic adj interacti$2 adj HPLC) or (hydrophobic adj interacti$2 adj High adj Performance adj Liquid adj Chromatograph$2) or HIC or (TSK adj phenyl) or (Toyopearl adj phenyl) or (phenyl adj sepahrose) or phenylsepahrose or (bio adj2 TSK) or (bio$3 adj TSK)) same (serum or plasma or blood or immunoglobulin$3 or gammaglobulin$3 or albumin$2))	USPAT; US-PGPUB; EPO; DERWENT	2004/03/20 15:25